IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 9, 11 and 17, AMEND claims 4, 6, 8, 13 and 14 and ADD new claim 19 in accordance with the following:

1. (ORIGINAL) A wavelength-division multiplexing optical communication system in which an optical lossy medium, optical amplifiers and Raman amplifiers for compensating for loss in the optical lossy medium are cascade-connected, said system comprising:

means, which is provided in an optical amplifier, for correcting slope of a wavelength characteristic produced by wavelength-dependent loss of the optical lossy medium;

acquisition means for acquiring state of use of a Raman amplifier, at a node the same as that of the optical amplifier, in a link opposing a link in which said optical amplifier exists, or state of use of a Raman amplifier at a node downstream of said optical amplifier; and

means for deciding, based upon the state of use of the Raman amplifier, whether or not to cause the optical amplifier to perform a slope correction.

2. (ORIGINAL) The system according to claim 1, wherein said acquisition means includes:

means for demultiplexing light of a monitoring control signal from main-signal light; and

means for acquiring, from the light of the monitoring control signal in a link opposing that of said optical amplifier, the state of use of a Raman amplifier at a node downstream of said optical amplifier.

3. (ORIGINAL) The system according to claim 1, further comprising an external control unit for ascertaining the state of use of a Raman amplifier at each node based upon a monitoring control signal sent and received at each node together with main-signal light; wherein said acquisition means acquires, from said external control unit, state of use of a Raman amplifier at a node downstream of said optical amplifier.

4. (CURRENTLY AMENDED) A wavelength-division multiplexing optical communication system in which an optical lossy medium, optical amplifiers and Raman amplifiers for compensating for loss in the optical lossy medium are cascade-connected, said system comprising:

means, which is provided in an optical amplifier, for correcting slope of a wavelength characteristic produced by wavelength-dependent loss of the optical lossy medium;

acquisition means for acquiring state of flattening-control implementation which indicates whether a Raman amplifier is implementing control to flatten a wavelength characteristic at a node downstream of the optical amplifier, based upon the wavelength characteristic on an input side or output side of ~~said~~ an optical amplifier connected ~~to~~ downstream from said Raman amplifier; and

means for deciding whether or not to cause said optical amplifier to perform a slope correction based upon the state of flattening-control implementation by said Raman amplifier.

5. (ORIGINAL) The system according to claim 4, further comprising:

a spectrum analyzer for detecting the wavelength characteristic on an input side or output side of said optical amplifier connected to said Raman amplifier; and

means provided in the Raman amplifier for performing flattening control based upon the wavelength characteristic detected by said spectrum analyzer.

6. (CURRENTLY AMENDED) The system according to claim ~~4~~4, wherein said acquisition means includes:

means for demultiplexing light of a monitoring control signal from main-signal light; and

means for acquiring, from the light of the monitoring control signal in a link opposing that of said optical amplifier, the state of flattening-control implementation at a node downstream of said optical amplifier.

7. (ORIGINAL) The system according to claim 4, further comprising an external control unit for ascertaining the state of flattening-control implementation by a Raman amplifier at each node based upon a monitoring control signal sent and received at each node together with main-signal light; wherein said acquisition means acquires, from said external control unit, the state of flattening-control implementation by a Raman amplifier.

8. (CURRENTLY AMENDED) A wavelength-division multiplexing optical communication system in which an optical lossy medium, optical amplifiers and Raman amplifiers for compensating for loss in the optical lossy medium are cascade-connected, said system comprising:

slope-correction control means, which is provided in a Raman amplifier, for correcting slope of a wavelength characteristic produced by wavelength-dependent loss of the optical lossy medium;

first means for calculating amount of slope correction based upon amount of tilt of a wavelength characteristic ~~of~~ produced in a transmission line ~~produced~~ between said Raman amplifier and a node at a receiving end; and

second means for setting the amount of slope correction in said slope-correction control means of said Raman amplifier; wherein the amount of slope correction is calculated ~~performed solely by said Raman amplifier~~ by acquiring an amount of tilt at an input section of each optical amplifier that is downstream from the Raman amplifier, summing the amounts of tilt to produce an overall tilt, dividing the overall amount of tilt by the number of input sections downstream from the Raman amplifier to produce a result, and adding the result of division to a current amount of slope correction.

9. (CANCELLED)

10. (ORIGINAL) The system according to claim 8, wherein there is provided a spectrum analyzer for detecting a wavelength characteristic at an input section of each optical amplifier; and

said slope-correction control means calculates amount of tilt of a wavelength characteristic at an input section of each optical amplifier based upon result of detection by said spectrum analyzer, and calculates a necessary amount of slope correction from this amount of tilt.

11. (CANCELLED)

12. (ORIGINAL) The system according to claim 8, further comprising:

a spectrum analyzer for detecting a wavelength characteristic at an input section of an optical amplifier; and

a flattening controller provided in a Raman amplifier for flattening a wavelength characteristic detected by said spectrum analyzer; wherein a slope correction is performed by adding amount of correction by flattening control to amount of correction by slope-correction control.

13. (CURRENTLY AMENDED) A wavelength-division multiplexing optical communication system ~~in which an optical lossy medium, optical amplifiers and Raman amplifiers for compensating for loss in the optical lossy medium are cascade-connected, said system comprising: slope-correction control means, which is provided in a Raman amplifier, for correcting slope of a wavelength characteristic produced by wavelength dependent loss of the optical lossy medium; and~~according to claim 8, wherein

said first means ~~for calculating~~calculates the amount of ~~slope correction by the Raman amplifier~~tilt by subtracting, from ~~an~~ said overall amount of tilt of a wavelength characteristic produced between said Raman amplifier and a node at a receiving end, an amount of slope correction by the optical amplifiers that exist between said Raman amplifier and said node at the receiving end~~, and setting the calculated amount of slope correction in said slope-correction control means; wherein said Raman amplifier performs a slope correction based upon the set amount of slope correction~~.

14. (CURRENTLY AMENDED) A wavelength-division multiplexing optical communication system in which an optical lossy medium, an optical amplifier and a Raman amplifier for compensating for loss in the optical lossy medium are cascade-connected, said system comprising:

slope-correction control means, which is provided in each of an optical amplifier and Raman amplifier wherein amount of slope correction is limited, for correcting slope of a wavelength characteristic produced by wavelength-dependent loss of the optical lossy medium; and

means for acquiring information concerning wavelength-dependent loss of the optical loss medium between nodes and amount of slope correction by each optical amplifier and Raman amplifier, calculating from this information and amounts of slope correction an amount of tilt of a wavelength characteristic at an input section of each optical amplifier, deciding amounts of slope correction by the optical ~~loss compensators~~amplifiers in order from an upstream side using the amount of tilt, and repeating the above control with respect to a downstream node when the amount of slope correction has exceeded the capability of an optical

~~loss compensator~~amplifier, thereby deciding and setting amount of slope correction by each optical ~~loss compensator~~amplifier; wherein said optical ~~loss compensator~~ performs a slope correction using the set amount of slope correction.

15. (ORIGINAL) The system according to claim 14, further comprising:

a spectrum analyzer for detecting a wavelength characteristic at an input section of the optical amplifier; and

a flattening controller provided in a Raman amplifier for flattening the wavelength characteristic detected by said spectrum analyzer; wherein the slope correction is performed by adding the amount of the slop correction control and the amount of the flattening control.

16. (ORIGINAL) The system according to claim 14, wherein there is provided a spectrum analyzer for detecting a wavelength characteristic at an input section of each optical amplifier;

amount of tilt of a wavelength characteristic at an input section of each optical amplifier is calculated based upon result of detection by said spectrum analyzer.

17. (CANCELLED)

18. (ORIGINAL) The system according to claim 14, wherein correction of calculated amount of tilt is performed not only by optical amplifiers and Raman amplifiers but also by devices such as gain equalizers inserted into said system.

19 (NEW) A wavelength-division multiplexing optical communication system comprising:

optical amplifiers provided at nodes, each node having two links respectively for optical transmission in two opposite directions;

a lossy optical medium extending between the nodes;

Raman amplifiers provided at selected links of selected nodes;

a communication connection between two different links to identify to a receiver link whether a Raman amplifier is provided at a transmitter link;

a slope correction unit provided at the receiver link, to correct the slope of a wavelength characteristic produced by wavelength-dependent loss in the optical lossy medium; and

a decision unit to activate the slope correction unit only if a Raman amplifier is not provided at the transmitter link.

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